wdin Wildlife Disease Information Node
A one-stop resource for wildlife health information

WDIN Highlights
*An online bulletin spotlighting
WDIN features and functions*

nbii

Volume 03, Issue 06   **06.15.2008**

USFWS

Brown Bear
Photo courtesy of Steve Hillebrand, USFWS Digital Library System

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Stepping Out at the USGS Geographical Information Science Workshop
Showcasing the WDIN Global Wildlife Disease News Map

NBII Wildlife Disease Information Node (WDIN) Technical Manager, Megan Hines, and Programmer, Steve Gustafson, recently attended the U.S. Geological Survey (USGS) Seventh Biennial Geographic Information Science (GIS) Workshop (USGS-GIS 2008) at the Denver Federal Center in Denver, Colorado, held May 12 -16, 2008. This conference

Figure 1: USGS GIS Workshop 2008 Poster

brought "together GIS professionals from all of the USGS disciplines across all regions, and focus[ed] primarily on the needs and accomplishments of the USGS." The proceedings for this workshop are available here.
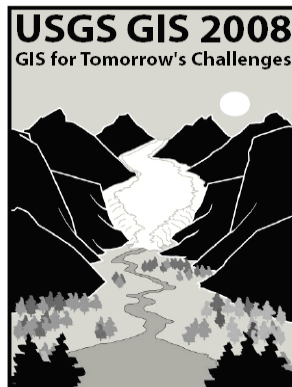
Representing WDIN, Megan presented both a poster (Figure 2) and demonstration on the Global Wildlife Disease News Map entitled, "Global Wildlife Disease News Map - putting wildlife health news on the map!" In brief, the Disease News Map application allows articles from the Wildlife Disease News Digest that reference disease detection or spread to be placed on a map. This gives readers a geographical perspective on the wildlife disease issues that are making the news near them and around the world. For a quick overview the Map, visit the WDIN website here.

Out of approximately 50 other posters presented, WDIN was honored by having Megan's poster named "Most Socially Relevant. The poster is available for viewing here.

The demonstration lecture showcased how the WDIN Disease News Map works. In addition, Megan discussed how other WDIN tools enabled the Map to function, its geoRSS feed, KML access, and the future plans for the application. For more information, take a look at the PowerPoint© slides from this presentation.

Figure 2: Award-winning WDIN Poster

The lecture given was part of the conference session, "Role of the Environment and Wildlife in Human Health". An interesting highlight of the lecture was the discussion it generated about the challenges of automated geocoding based on text, i.e. the written name of a place. One common theme from this discussion is that there are a number of sources for geocoding, but they not integrated. The result is a mapmaker may have to consult numerous sources in order to geocode all the locations on a map.

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GeoNames – A Geocoding Tool

Shortly after this workshop, the WDIN technical staff discovered the website GeoNames. Though it does not address all the geocoding challenges discussed at the workshop, it does offer some solutions for WDIN needs. Most significantly, it integrates geographical data from over 100 data sources. Other GIS users may find the tools and services on the GeoNames site to be useful; we encourage mapmakers to check out the website, http://www.geonames.org.

GeoNames is a free database of over 8 million geographical names that allows geocoding based upon text. The geographical data found in the GeoNames database comes from a collection of over 100 data sources, including National Geospatial-Intelligence Agency and the U.S. Geological Survey Geographic Names Information System. GeoNames allows users to interact with the database through a Wiki. This way, users can submit corrections to existing locations or add ones that are missing.

The database recognizes the written name of a place, and provides geographical information attributed to that place. The geographic database is accessible in a variety of manners. First, users can simply log on to the website, do a quick search for a place, and return geographic information for that place. Users can also choose to have a daily download of the database information – a "database dump" – in text file format, or use GeoNames' web-based services to stream the data to a website via XML or JSON formats, both free-of-charge.

How Does WDIN Use GeoNames?

Currently WDIN uses the GeoNames web-based browser to search for latitude and longitude coordinates for place names from wildlife disease related news articles. This geographical information is used to manually geocode the articles so that they can be placed on the Wildlife Disease News Map. Our goal is to automate this process in the future.

Figure 3: GeoNames web site

WDIN provides resources for map makers as well, by making the data from the Disease News Map available as a KML File for Google Earth and a RSS feed which can stream this map layer into almost any mapping application. To learn how to access these geodata layers, see this issue's "Sidenotes". We hope you find these resources useful. Please contact us with any questions or comments at wdin@usgs.gov.
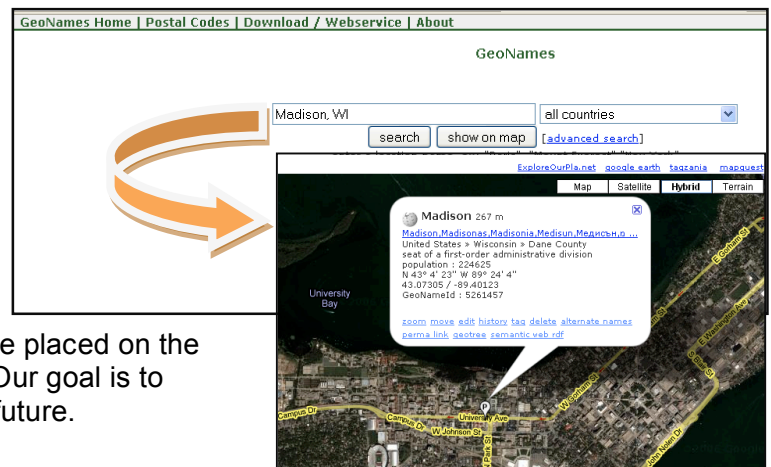
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IN THE SPOTLIGHT

Learn Something New About WDIN - Browse the WDIN Highlights Archive

Find out about the many features and functions of WDIN's website and tools, its mission, and our partners through past Highlights issues.

All the back issues are available on the WDIN's Get News page.

Each issue spotlights a different aspect of WDIN, so they are an excellent resource to learn about our activities, as well as how our tools and services were created and how best to use them to stay current on the topic of wildlife disease.

Have an idea for a future WDIN Highlights article? Let us know at wdin@usgs.gov.

Keep Up Between Highlights Issues

Get Notified of Newly Added Resources

WDIN offers a 'New Content' RSS Feed that will show you our newest resources as they are added. Visit **our RSS feeds web page** to learn more.

Interested but not sure what a RSS feed is? Get a quick overview in our WDIN Highlight issue, **WDIN has RSS Feeds - Great!? What is an RSS Feed?**

Top WDIN Resource Links for May 2008

1. Avian Influenza Map Showing Location of Reported Cases Based on News Articles
2. A White-Tailed Deer Population Distribution Map
3. Interactive Mapping of Wildlife Mortality Events
4. Chronic Wasting Disease Distribution in Free-ranging (by County) and Captive Cervids - April 2007
5. West Nile Virus Cumulative Disease Map 2006
6. National Atlas of the United States of America - West Nile Virus Maps from 2000
7. A Moose Population Distribution Map
8. Avian Influenza Maps - A Compiled List
9. California Vectorborne Disease Surveillance System
10. Maps: West Nile Virus Bird Surveillance
11. A Mule Deer Population Distribution Map
12. Avian Influenza Timeline - View the Spread of the Disease Day-by-Day [Map]
13. Wildlife Disease Information Node - Map of Salmonella Mortality Events
14. Avian Botulism Outbreaks Since 1963 in Great Lakes Area
15. An Elk Population Distribution Map

New Resources Added to the WDIN Web Site

- Human, Animal, and Ecosystem Health [video]
- Diseases and the Environment – Gateway to Toxicology Databases [web site]
- Colorado Department of Public Health and Environment - West Nile Virus Animal Surveillance 2007 [Interactive Map]
- Colorado Department of Public Health and Environment - West Nile Virus Statistics and Surveillance, 2002-2006 – Animal Surveillance Sub-Section [web site]
- Fecal transmission of AA amyloidosis in the cheetah contributes to high incidence of disease. Prc. Natl. Acad. Sci. USA. 2008 May 20;105(20): 7263–7268 [free full-text]
- USGS CoreCast - You, Too, Can Track Avian Flu and Other Wildlife Diseases [podcast]
- USGS CoreCast - What's Killing Bats in the Northeast? [podcast]
- Inability of Real-Time Reverse Transcriptase PCR Assay To Detect Subtype H7 Avian Influenza Viruses Isolated from Wild Birds. J Clin Microbiol. 2008 May;46(5):1844-6. [online abstract only]
- Experimental Chronic Wasting Disease (CWD) in the Ferret. Journal of Comparative Pathology. 2008 May; 138(4): 189-196 [online abstract only]
- The Evolutionary Genetics and Emergence of Avian Influenza Viruses in Wild Birds. PLoS Pathogens. 2008. 4(5): e1000076. [free full-text available]

Instead of waiting for the next WDIN Highlights issue, get access to newly added resources as they become available. Learn how by reading the box to the left.

WDIN is a division of the National Biological Information Infrastructure (NBII)

Visit our website, wildlifedisease.nbii.gov, to find more resources. Updated weekly!

Questions? Comments? wdin@usgs.gov